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**Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals**

**Sub-Committee of Experts on the Transport of Dangerous Goods**

# Report of the Sub-Committee of Experts on the Transport of Dangerous Goods on its forty-sixth session

held in Geneva from 1 to 9 December 2014

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# I. Attendance

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its forty-sixth session from 1 to 9 December 2014 with Mr. J.M. Hart (United Kingdom) as Chairperson and Mr. C. Pfauvadel (France) as Vice-Chairperson.

2. Experts from the following countries took part in the session: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Finland, France, Germany, Italy, Japan, Kenya, Netherlands, Norway, Republic of Korea, South Africa, Spain, Sweden, Switzerland, United Kingdom and United States of America.

3. Under rule 72 of the rules of procedure of the Economic and Social Council, observers from the former Yugoslav Republic of Macedonia also took part.

4. Representatives of the European Union and the Intergovernmental Organization for International Carriage by Rail (OTIF) also attended.

5. Representatives of the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO) and the Universal Postal Union (UPU) were also present.

6. Representatives of the following non-governmental organizations took part in the discussion on items of concern to those organizations: Association of Hazmat Shippers (AHS); Australian Explosives Industry Safety Group (AEISG); Compressed Gas Association (CGA); Cosmetics Europe; Council on Safe Transportation of Hazardous Articles (COSTHA); Dangerous Goods Advisory Council (DGAC); Dangerous Goods Trainers Association (DGTA); European Association for Advanced Rechargeable Batteries (RECHARGE); European Association of Automotive Suppliers (CLEPA); European Chemical Industry Council (CEFIC); European Compliance Organization for Batteries (EUCOBAT); European Cylinder Makers Association (ECMA); European Industrial Gases Association (EIGA); European Metal Packaging (EMPAC); Federation of European Aerosol Associations (FEA); Institute of Makers of Explosives (IME); International Air Transport Association (IATA); International Association for Soaps, Detergents and Maintenance Products (AISE); International Bulk Terminals Association (IBTA); International Confederation of Container Reconditioners (ICCR); International Confederation of Drums Manufacturers (ICDM); International Confederation of Intermediate Bulk Container Associations (ICIBCA); International Confederation of Plastics Packaging Manufacturers (ICPP); International Council of Chemical Associations (ICCA); International Fibre Drum Institute (IFDI); International Paint and Printing Ink Council (IPPIC); International Petroleum Industry Environmental Conservation Association (IPIECA); KiloFarad International (KFI); La Brique (Togo); Portable Rechargeable Battery Association (PRBA); Responsible Packaging Management Association of Southern Africa (RPMASA); Sporting Arms and Ammunition Manufacturers' Institute (SAAMI); Stainless Steel Container Association (SSCA); World Nuclear Transport Institute (WNTI).

# II. Adoption of the agenda (agenda item 1)

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|---|---|
| *Documents:* | ST/SG/AC.10/C.3/91 (Provisional agenda)<br>ST/SG/AC.10/C.3/91/Add.1 (List of documents) |
| *Informal documents:* | INF.1, INF.2 (List of documents)<br>INF.5 (Provisional timetable) |

7. The Sub-Committee adopted the provisional agenda prepared by the secretariat after amending it to take account of informal documents (INF.1 to INF.75).

# III. Recommendations made by the Sub-Committee on its forty-third, forty-fourth and forty-fifth sessions (agenda item 2)

*Documents:* ST/SG/AC.10/C.3/2014/73 (Secretariat)
ST/SG/AC.10/C.3/2014/104 (Secretariat)

*Informal document:* INF.52 (Secretariat)

8. The Sub-Committee confirmed the decisions taken at the previous sessions on the basis of the consolidated text prepared by the secretariat, subject to a number of modifications and to the new decisions taken in respect of the various agenda items of the current session which had consequences for the list of amendments (see annex).

## A. Explosives and related matters

### 1. Globally harmonized standard for explosives security markings

*Document:* ST/SG/AC.10/C.3/2014/62 (IME)

*Informal document:* INF.9 (IME)

9. Although the Sub-Committee had encouraged IME to submit a proposal for a globally harmonized standard for explosives security markings, and a first proposal (ST/SG/AC.10/C.3/2014/5) had been submitted at the previous session, some experts expressed reluctance about the idea of introducing new security provisions in Chapter 1.4, mainly because the authorities competent for the security and tracing of explosives were not the same as those responsible for safety of transport.

10. Other experts recalled that the introduction of Chapter 1.4 in the Model Regulations had proven effective in practice for the improvement of the security of transport of dangerous goods. They saw no problem with the idea of supplementing it with provisions to trace the origin of explosives, even if that was not strictly speaking a measure related to security of transport. Indeed, there was apparently no other international instrument that could effectively ensure the implementation of such provisions at the international level.

11. As there was no consensus on the proposal and certain experts wished to make some suggestions for amendments, it was decided to revisit the question during the next biennium.

### 2. Proposals on the apparatus, materials and criteria of US flash composition tests

*Document:* ST/SG/AC.10/C.3/2014/72 (Japan)

12. Several experts thought that the document should be considered by the working group on explosives before any decision was taken. The document was placed on the agenda of the next session.

### 3. Classification of fireworks

*Document:* ST/SG/AC.10/C.3/2014/84 (Netherlands)

13. To some experts, it did not seem logical to classify certain fireworks, independently of series 6 test results. However, full-scale tests on containers with waterfalls had demonstrated a risk of mass explosion, despite their classification under 1.3 G in accordance with series 6 test results. The proposal was thus adopted, for reasons of safety, to classify waterfalls under 1.1 G or 1.3 G on the basis of the HSL test in appendix 7 of the Manual, instead of on the basis of series 6 tests (see annex).

14. The experts from China and Japan said they would like to revisit the question during the next biennium and were thus invited to submit relevant proposals if they so desired.

### 4. Transition period for amendments relevant to ammunition, smoke, containing titanium tetrachloride

*Document:* ST/SG/AC.10/C.3/2014/98 (United States of America)

*Informal document:* INF.30 (Austria)

15. The Sub-Committee agreed to amend special provision 204 in line with the alternative proposal submitted by the expert from Austria in informal document INF.30 (see annex).

### 5. Classification of articles under UN No. 0349

*Document:* ST/SG/AC.10/C.3/2014/86 (*continued*)

16. The Sub-Committee considered that the classification should be discussed by the working group on explosives at the next session. The expert from Italy said that he would submit additional information in the light of the comments made.

### 6. Special provision 280

*Document:* ST/SG/AC.10/C.3/2014/96 (COSTHA)

*Informal document:* INF.42 (CLEPA)

17. The proposal made by COSTHA was not supported, and that of CLEPA was considered even less acceptable. The Sub-Committee recognized that the current provisions could be improved so as to avoid problems of interpretation, but it considered that the consequences of possible amendments of special provision 280 would have to be checked by explosives experts. It would not be appropriate to seek a solution during the current session by attempting to amend more general provisions of Chapter 4.1, which could have unforeseen consequences for all packagings.

### 7. Special packing provision PP48

*Document:* ST/SG/AC.10/C.3/2014/93 (France)

*Informal document:* INF.63 (France)

18. The proposal to modify special packing provision PP48 concerning non-metal packagings that happen to contain small quantities of metal parts was adopted with some amendments (see annex).

## B. Listing, classification and packing

### 1. Carriage of environmentally hazardous substances UN Nos. 3077 and 3082 and application of special provision 375

*Informal document:* INF.25 (Switzerland)

19. The Sub-Committee confirmed that the application of special provision 375 was optional, i.e., that a consignor could choose not to take advantage of the exemption, in which case all the provisions for such substances had to be met. If the expert from Switzerland considered that the wording of special provision 375, or of other similar special provisions, could lead to confusion, he should submit a proposal with improved wording during the next biennium.

**2. Classification under UN No. 2211, polymeric beads, expandable**

*Document:* ST/SG/AC.10/C.3/2014/77 (CEFIC)

*Informal document:* INF.20 (CEFIC)

20. The Sub-Committee adopted the proposed procedure for declassification of polymeric beads, expandable, where appropriate, on the basis of the proposal in informal document INF.20 with some amendments (see annex).

**3. Classification inconsistencies**

*Document:* ST/SG/AC.10/C.3/2014/74 (Belgium and United States of America)

*Informal documents:* INF.45/Rev.1 (Canada)
INF.50 (United Kingdom)
INF.64 (Belgium and United States of America)

21. The Sub-Committee voted to adopt a new 2.0.0.2 to allow, with the approval of the competent authority, the carriage of substances included in the list of dangerous goods but which present additional hazards not identified in the list, in conditions such that all the hazards presented are identified, together with some related amendments to 2.0.2.2 and sub-section 5.4.1.5, on the basis of informal document INF.64 with some amendments (see annex).

**4. Classification of small quantities of environmentally hazardous substances that are also viscous flammable liquids**

*Document:* ST/SG/AC.10/C.3/2014/87 (IPPIC)

22. The proposal to exempt environmentally hazardous Class 3 viscous liquids that meet the conditions for exemption in 2.3.2.5 and special provision 375 was adopted (see annex).

**5. Table tennis balls transported as UN No. 2000**

*Document:* ST/SG/AC.10/C.3/2014/92 (DGAC)

*Informal document:* INF.69 (DGAC)

23. The Sub-Committee adopted a special provision exempting celluloid table tennis balls when they were packaged in certain conditions (see annex).

**6. Fuels in engines and machinery**

*Document:* ST/SG/AC.10/C.3/2014/88 (Belgium)

*Informal documents:* INF.48 (DGAC)
INF.56 (RECHARGE)
INF.72 (Belgium)

24. After discussion in plenary, the documents were considered by a lunchtime working group which consolidated its proposals in informal document INF.72. These proposals were adopted with a few modifications (see annex).

7. **Dangerous goods in machinery, apparatus or articles, N.O.S.**

*Document*: ST/SG/AC.10/C.3/2014/102 (United Kingdom)

*Informal documents*: INF.24 (Germany)
INF.49 (United Kingdom)
INF.51 (United Kingdom)

25. The Sub-Committee thanked the expert of the United Kingdom for the work done on this issue. As it was considered premature to decide on the proposals made, the expert from the United Kingdom withdrew the document and said that she would prepare a new one for the next session to take account of comments made.

8. **Classification of polymerizing (stabilized) substances**

*Document*: ST/SG/AC.10/C.3/2014/82 (Germany and DGAC)

*Informal documents*: INF.34 (United States of America)
INF.75 (Germany, United States of America and DGAC)

26. As there was no consensus as to whether polymerizing substances should be classified in Class 9 as proposed by Germany and DGAC or Division 4.1 as proposed by the United States of America, the question was put to the vote after long discussions and it was decided to include them in Division 4.1. Once this decision was taken, a drafting group met to draft provisions taking account of the comments made, that were consolidated in INF.75 which was adopted with some changes (see annex).

## C. Electrical storage systems

1. **Transport of lithium batteries manufactured in small production runs or prototypes of lithium batteries contained in equipment. Amendment of special provision 310.**

*Documents*: ST/SG/AC.10/C.3/2014/67 (Germany)
ST/SG/AC.10/C.3/2014/105 (United Kingdom)

*Informal documents*: INF.36 (RECHARGE, PRBA)
INF.55 (PRBA, RECHARGE)

27. The proposal to amend special provision 310 and to add a new packing instruction P910 was adopted as it appeared in informal document INF.55, with a few amendments (see annex).

28. Some experts opposed the idea of requiring an entry in the transport document when special provision 310 was invoked, as they considered the new requirement difficult to implement. Their objection, when put to the vote, was not carried.

2. **Definitions for batteries in the Model Regulations**

*Document*: ST/SG/AC.10/C.3/2014/90 (DGAC)

29. The representative of DGAC withdrew his proposal, as the question of definitions was being discussed in the work of the informal working group on lithium batteries.

### 3. Report of the informal working group on testing large lithium batteries

*Informal documents:* INF.11 and INF.11/Add.1 (France, PRBA, RECHARGE and COSTHA)

30. Proposals 1 to 6 were considered one by one and adopted with some amendments (see annex).

31. Opinions were divided between the two options under proposal 4. Some experts thought that the proposed T4 shock test should apply only to large batteries; they were reluctant to change the current T4 test for small batteries without having comparative results showing that applying the principle of the proposed T4 test for large batteries to small batteries ensured a level of safety at least equivalent to that provided by the current T4 test.

32. Other experts considered it logical to apply the same principles for small and large batteries. Most of the experts thus supported option 1, which was adopted. Appropriate transitional measures needed to be introduced during the forthcoming two-year period, and the industry representatives were asked to supply the test results.

33. The Sub-Committee also agreed that the informal working group should continue its work during the forthcoming biennium in respect of some of the points identified in informal document INF.11, annex 2:

- Examination of the consistency of the provisions of the Model Regulations and the Manual of Tests and Criteria with the IEC Standards terminology and definitions of cell and battery (consider the definitions in light of the test provisions and special provision 188);
- Presentation of the test requirements in a table to clarify their applicability;
- Update of the definitions to take account of cell design development (for example, cells made of several electrochemical units in the same casing);
- Pending issue of testing large cells in small batteries (peak acceleration applied to small batteries is higher than that required for the cells they contain);
- Development of a test report template (who is it intended for? key information to be included; confidentiality issues; appropriateness of 6.1.5.7. as a model).

34. The Sub-Committee was not in favour of further extending the informal working group's mandate. If there were new issues that required consideration, they should be raised before the Sub-Committee first.

35. The secretariat was asked to communicate the amendments to section 38.3 of the Manual to the World Forum for Harmonization of Vehicle Regulations (WP.29) so that it could consider their possible relevance to Regulation No. 100, Revision 2, of the 1958 Agreement.

### 4. Consideration of what constitutes "equipment"

*Document:* ST/SG/AC.10/C.3/2014/101 (IATA)

*Informal documents:* INF.27 (RECHARGE)
INF. 59 (ICAO)
INF. 68 (IATA)
INF. 70 (PRBA, RECHARGE)

36. The proposal contained in informal document INF.70 to amend paragraph (f) of special provision 188 was adopted (see annex). The expert from the United States of

America expressed a reservation about taking a decision of such consequence on the basis of a late informal document without providing time for appropriate national consultation.

## D. Transport of gases

### 1. Updating of references to ISO standards

*Document:* ST/SG/AC.10/C.3/2014/71 (ISO)

37. The proposed amendments to the references in 4.1.4.1 P200 (5) u and 6.2.2.1.1 were adopted (see annex).

### 2. Marking on packages

*Document:* ST/SG/AC.10/C.3/2014/83 (EIGA and AEGPL)

*Informal documents:* INF.31 (CGA)

38. The Sub-Committee agreed to add a NOTE to 5.2.2.2.1.2 containing only the final sentence of the NOTE proposed by EIGA and AEGPL (see annex). The other proposed amendments were withdrawn.

### 3. Working group on global recognition of UN and non-UN pressure receptacles

*Document:* ST/SG/AC.10/C.3/2014/106 (CGA)

39. The working group met during a lunchtime session on 1 December 2014. The Sub-Committee endorsed the group's conclusions, which were presented orally:

(a) Work on the issue would continue over the next biennium;

(b) There was recognition of manufacturing approvals for UN pressure receptacles at the regional level, for instance between the United States of America and Canada or between European countries. Additional regional agreements might be necessary to further recognition;

(c) Next steps:

(i) EIGA would provide detailed information on approval processes and systems for the manufacture of UN pressure receptacles in Europe, including references to the applicable sections of the Regulations;

(ii) CGA would do the same for the United States of America and Canada;

(iii) The experts from European Union member States would initiate a process to engage the Transportable Pressure Equipment Directive Administrative Cooperation Group (TPED ADCO) to explore possible future cooperation for the mutual recognition of UN pressure receptacles, for example with the United States of America and Canada. As chairperson of the group, the expert from Belgium agreed to present the issue to the next TPED ADCO session;

(iv) The expert from the United States of America would explore the possibility of amending Title 49 of the Code of Federal Regulations (49 CFR) so that it would recognize approvals for UN pressure receptacles issued in other countries such as the countries of the European Union; the expert from Canada would do the same in respect of that country's Transportation of Dangerous Goods Regulations.

## E. Miscellaneous pending issues

### 1. Marking of the overpack with the mark "OVERPACK"

*Document:* ST/SG/AC.10/C.3/2014/65 (Spain)

*Informal documents:* INF.19 (Spain)
INF.39 (Sweden)

40. The questions posed by the expert from Spain were discussed at length. Several experts would have preferred to postpone the discussion until the next biennium, as they were concerned that a rushed decision could have some unforeseen consequences.

41. In order to clarify the current requirements of the Model Regulations, the Sub-Committee adopted the proposal contained in informal document INF.39, with a few amendments (see annex).

### 2. Use of the terms "mark" and "marking" in the Model Regulations

*Document:* ST/SG/AC.10/C.3/2014/68 (United Kingdom)

42. The proposal was adopted (see annex).

### 3. Leakproofness testing procedures carried out before first use and during the periodic inspection for packagings and IBCs

*Document:* ST/SG/AC.10/C.3/2014/76 (Sweden)

*Informal documents:* INF.6 (Sweden)
INF. 26 (ICCR)
INF.43 (Belgium and Netherlands)

43. The production leak test does not necessarily have to comply with the design type test. However, samples taken from the production are expected to meet the design requirements. For this reason the proposed amendments to 4.1.1.12, 6.1.1.3 and 6.5.4.4 in informal document INF.43 were adopted with some modifications (see annex).

### 4. Classification and hazard communication provisions for crude oil

*Informal document:* INF.37 (IPIECA)

44. The Sub-Committee took note of the information provided following the discussions of document ST/SG/AC.10/C.3/2014/49, which had been submitted at the previous session to provide information on rail accidents involving crude oil in North America.

### 5. Marking of portable tanks

*Document:* ST/SG/AC.10/C.3/2014/78 (CEFIC)

45. The proposal to allow placards and marks of reduced size for small portable tanks was adopted with some editorial changes (see annex).

### 6. Labels and marks of reduced size

*Document:* ST/SG/AC.10/C.3/2014/97 (IPPIC, CEFIC)

*Informal document:* INF.57 (IPPIC and CEFIC)

46. Some experts supported the principle of allowing reduced size labels and marks when there is not enough space on the package to display all information required by the various regulations applicable. However, most experts did not support the solution

proposed, bearing in mind in particular the principle of transport hazard communication that labels should be visible from a distance to allow emergency responders to identify the danger without unnecessary risk.

7. **Appropriate hazard communication – lithium batteries and class 9**

*Document:* ST/SG/AC.10/C.3/2014/89 (United Kingdom)

*Informal documents:* INF.21 (United Kingdom)
INF.28 (PRBA, RECHARGE)
INF.41 (IATA)
INF.58 (ICAO)
INF.73 (IATA)

47. The United Kingdom document contained three proposals for specific marks and labels for the various substances and articles of class 9. Although there was support for proposal 1 concerning lithium batteries, the discussion in plenary showed that several experts would prefer to discuss proposal 2 in the next biennium or were even reluctant to discuss proposal 3 in a near future. The proposals were referred to a lunchtime working group which developed new provisions for marking and labelling lithium batteries (INF.73) which were adopted (see annex).

48. As opinions remained divided on proposals 2 and 3, it was agreed to postpone their discussion to the next biennium.

# IV. Global harmonization of transport of dangerous goods regulations with the Model Regulations

## A. Sequence of information in the transport document

*Document:* ST/SG/AC.10/C.3/2014/63 (Germany)

49. Some experts supported the proposal that the location and order in which the elements of additional information required in 5.4.1.5 appear in the transport document should be left optional. However the majority of experts considered that these additional elements of information should not precede those required in 5.4.1.4 (dangerous goods description) and the proposal, put to the vote, was rejected.

## B. Placarding of cargo transport units

*Document:* ST/SG/AC.10/C.3/2014/66 (Spain)

*Informal document:* INF.40 (Sweden)

50. The proposal of amendment to 5.3.1.1.4 was adopted with editorial corrections (see annex).

## C. Outcome of the 2014 autumn session of the RID/ADR/ADN Joint Meeting

*Informal document:* INF.8 (Secretariat)

51. Most issues raised in this document were discussed under separate agenda items.

52. For the question concerning the periodic inspection of individual gas cylinders or tubes in MEGCs, it was recalled that the original principle when the provisions of section 6.7.5 were developed was that it was not necessary to disassemble the individual elements if it was possible to carry out the inspection satisfactorily without doing so.

### D. Outcome of the ICAO Dangerous Goods Panels Working Group meeting (DGP-WG/4)

*Informal document* INF.59 (ICAO)

53. The Sub-Committee noted the information provided. For the question of compliance with testing requirements for lithium batteries, the Sub-Committee noted with satisfaction the information provided by the representation of PRBA that his organization would make available information on properly tested batteries. The Chairman also recalled that the informal working group on lithium batteries had been asked to formulate a standardized test report, which should help monitoring compliance of lithium batteries with test requirements.

### E. Bulk carriage of coal

*Informal document* INF.38 (Secretariat)

54. The Sub-Committee noted that fire incidents during carriage of coal in bulk by rail and inland waterways had led to amendments to RID and ADN. Investigation had shown that certain coals possess self-heating properties but there were uncertainties as to whether coal possessing such properties should be carried under UN No. 1361 or not, although the French name "charbon" for the English name "carbon" seemed to imply that this was the correct entry.

55. The Sub-Committee considered that this issue could be discussed in the next biennium provided that proposals were submitted as deemed appropriate. It was also suggested that testing laboratories should exchange information in this respect.

## V. Guiding principles for the Model Regulations (agenda item 4)

**Proposal for the development of illustrated guidance for the labelling and marking of packagings, containers and tanks**

*Informal document*: INF.12 (Republic of Korea)

56. Several experts supported the proposal to develop such guidance that could be made publicly available on the secretariat website, and that could be useful in the context of training. Nevertheless it was underlined that such illustrated guidance should not be part of the Guiding Principles since it is intended to help users rather than regulators. Some experts warned that such guidance would have to be cautiously prepared to avoid that the examples given being interpreted as the only way to comply with the requirements. Therefore the Sub-Committee agreed that the principle, value, purpose and practicability of providing guidance on the use of the Model Regulations should be further considered in the next biennium.

## VI. Electronic data interchange for documentation purposes (agenda item 5)

57. As no document had been submitted under this agenda item, it was not discussed and it was agreed not to keep this item as a standing item for the next biennium.

## VII. Cooperation with the International Atomic Energy Agency (agenda item 6)

### Outcome of TRANSSC 29

*Informal document:* INF.67 (IAEA)

58. The Sub-Committee took note of the report provided by the IAEA on the outcome of the 29th session of its Transport Safety Standards Committee held in Vienna from 10-13 November 2014.

## VIII. New proposals for amendments to the Model Regulations on the Transport of Dangerous Goods (agenda item 7)

### A. Insertion of a new and a replacement ISO standard in 6.2.2

*Document:* ST/SG/AC.10/C.3/2014/70 (ISO)

59. The two proposals were adopted (see annex).

### B. Proposal for changing 6.2.1.1.9 – Additional requirements for the construction of pressure receptacles for acetylene

*Document:* ST/SG/AC.10/C.3/2014/75 (ECMA)

*Informal documents:* INF.23 (ECMA)
INF.74 (ISO and EIGA)

60. The Sub-Committee adopted the proposed amendments to 6.2.2.1.9 as drafted in informal document INF.74.

### C. Compatibility tests of plastics packagings and IBCs

*Document:* ST/SG/AC.10/C.3/2014/85 (Germany)

61. As several experts expressed reluctance at referring to ISO 13274:2013 for chemical compatibility testing for various reasons, the expert from Germany withdrew her proposal and said that she would consider submitting a revised proposal if deemed appropriate.

## D. Classification of seed cake

*Document:* ST/SG/AC.10/C.3/2014/80 (Germany)

*Informal documents:* INF.34 (United States of America)
INF.75 (Germany, United States of America and DGAC)

62. As quite a number of questions were raised during the discussion, the expert from Germany withdrew her proposal and said that she would submit a new one at the next session.

## E. Definition of vehicle in special provision 240

*Document:* ST/SG/AC.10/C.3/2014/94 (France)

63. The proposal intended to clarify that the scope of special provision 240 covered vehicles transported in a packaging and that, in such a case, some parts of the vehicle (including a battery), may be detached from its frame to fit into the packaging, was put to the vote and adopted with a modification (see annex).

## F. Classification of N-Aminoethylpiperazine (UN 2815)

*Document:* ST/SG/AC.10/C.3/2014/100 (United States of America)

64. The proposal to assign a subsidiary risk of division 6.1 was adopted (see annex).

## G. Packaging requirements for damaged or defective lithium batteries

*Document:* ST/SG/AC.10/C.3/2014/107 (DGAC)

65. As there was no support for this proposal of allowing combustible material as cushioning material, the representative of DGAC withdrew it.

## H. Raising the 100 Wh limit for the packaging and labelling requirements of small excepted lithium-ion batteries under special provision 188

*Document:* ST/SG/AC.10/C.3/2014/108 (RECHARGE)

66. Some experts did not support this proposal because it was not accompanied by a safety assessment and they feared that there would be no possibility to prevent lithium-ion batteries with a higher Wh limit authorized for land transport only from being shipped by air and sea as well.

67. Other experts considered that such batteries could be carried by sea as well and proposed that multimodal provisions be considered in the next biennium, while others felt that such provisions should be limited to land transport and be considered at national or regional level only.

68. The Sub-Committee agreed that RECHARGE could submit a suitable proposal for multimodal transport at the next session with appropriate justification from the safety standpoint.

### I. Amendment to P909 (3)

*Informal document* INF.32 (Germany)

69. The proposal was adopted with a modification (see annex).

### J. Revised name and description for sodium dithionite (UN 1384)

*Informal document* INF.47 (Canada)

70. It was recalled that, according to 2.0.2.5 (c), if the physical state of a solution is different from that of the substance named in the dangerous goods list, it should not be assigned the same UN number. The expert from Canada withdrew his proposal add to the word "SOLID" to the proper shipping name of UN 1384 and said that he would consider submitting an official proposal in the next biennium if still deemed appropriate.

### K. Classification in Division 4.3

*Informal document*: INF.54 (IATA)

71. The proposal to align 2.4.4.3.3 with paragraph 33.4.1.4.4.1 (b) of the Manual of Tests and Criteria was adopted subject to the concurrence of the GHS Sub-Committee since table 2.12.1 in the GHS would also have to be amended accordingly.

### L. Special provision 310

*Informal document* INF.65/Rev.1 (Austria)

72. The expert from Austria said that consideration of this proposal should be deferred to the next session.

## IX. Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals (agenda item 8)

### A. Desensitized explosives

*Document*: ST/SG/AC.10/C.3/2014/81 (Germany)

*Informal documents*: INF.4 (Germany)
INF.18 (Germany)

73. The Sub-Committee endorsed the proposal for introduction of a new Chapter 2.17 "Desensitized explosives" in the GHS and recommended its adoption by the GHS Sub-Committee. It was noted that the consequential amendments to the Manual of Tests and Criteria listed in ST/SG/AC.10/C.3/2014/2 submitted at the last session remained unchanged and the Sub-Committee agreed that they should be made if this new GHS chapter was adopted by the GHS Sub-Committee.

## B. Pyrophoric gases

*Document*: ST/SG/AC.10/C.3/2014/91 (United States of America)

74. The Sub-Committee took note of the answers to questions raised at the last session and confirmed its endorsement of the list of amendments provisionally adopted by the GHS Sub-Committee at its last session for the inclusion of pyrophoric gases as a hazard category in the flammable gases hazard class of the GHS.

## C. Criteria for water-reactivity

*Informal document*: INF.33 (United States of America)

75. The Sub-Committee noted that the full report "HM-14: Test Procedures and Classification Criteria for Release of Toxic Gases from Water-Reactive Materials" had now been issued by the United States Transportation Research Board. Experts were invited to review it and to conduct trials and share the results. The Sub-Committee agreed that work should continue in the next biennium.

## D. Tests and criteria for oxidizing solids

76. This agenda sub-item was discussed under agenda item 9 (Programme of work for the biennium 2015-2016) (see paragraph 91).

## E. Classification criteria and flammability categories for certain refrigerants

77. This agenda sub-item was discussed under agenda sub-item 8 (i) (see paragraph 88).

## F. Expert judgement weight of evidence

78. As no document had been submitted under this sub-item, it was not discussed.

## G. Corrosivity criteria

### 1. Revision of Chapter 2.8 of the Model Regulations

*Documents*: ST/SG/AC.10/C.3/2014/69 (Netherlands)
ST/SG/AC.10/C.3/2014/99 (United States of America)
ST/SG/AC.10/C.3/2014/104 (United Kingdom)

*Informal documents*: INF.3 (Netherlands)
INF.14 (CEFIC)
INF.15 (CEFIC)
INF.35 (United States of America)
INF.46 (Canada)
INF.60, INF.61 and INF.71 (Netherlands)

79. After long discussions, there was no consensus on any one of the three options for a new Chapter 2.8 proposed in ST/SG/AC.10/C.3/2014/99 and informal documents INF.46 and INF.71. The remaining key difficulties brought up in the discussion were:

(a) The application of a methodology for the additivity approach bearing in mind that the practice today and in future has to take account of professional judgement and weight of evidence; the GHS Sub-Committee should be asked to review and simplify this approach;

(b) The difficulty in assigning packing groups, and the unresolved concern whether the default classification should result in packing group I or II; those involved in classification (industry and competent authorities) should share more information on test results on mixtures of known composition;

(c) The form of wording for transposing GHS text into the regulatory provisions of the Model Regulations, it being understood that some guidance can be provided in the Model Regulations in the form of notes under the regulatory requirements.

80. It was also suggested that the principles which had been agreed for the review of Chapter 2.8, as summarized in paragraph 2 of ST/SG/AC.10/C.3/2014/104 should not be forgotten; that the way classification and assignment to packing groups is carried out currently by practitioners should be better identified, studied and taken into account; that assignment to packing groups might be disconnected from the classification in sub-categories 1A, 1B and 1C, and whether these sub-categories are effectively used in sectors other than transport should be checked; and that concentration limits should be looked at more closely.

81. The Sub-Committee expressed sincere thanks to all those who had participated in this work, notably the chairman of the Joint TDG/GHS working group on corrosivity criteria and the expert from the Netherlands, but concluded that further work would be necessary in the next biennium before a final decision could be envisaged.

### 2. Applicability of in vitro tests for the assessment of substances and preparations to be assigned to Class 8

*Informal document*: INF.13 (CEFIC)

82. The Sub-Committee felt that this proposal of amendment to 2.8.2.4 should be discussed in the next biennium in the context of the review of Chapter 2.8, and CEFIC was invited to submit an official proposal. The question of how to deal with new versions of OECD Test Guidelines in Chapter 2.8 should also be addressed.

### 3. Wording regarding the property "Corrosive to metals"

*Informal document*: INF.29 (Austria)

83. The Sub-Committee felt that it was not necessary to amend the current text of 2.8.2.5 (c) (ii) because the NOTE made it clear that it is not necessary to perform the test on a second metal if the test on a first metal gives a positive result, but it is necessary to perform a test on a second metal if the test on a first metal gives a negative result. As a consequence, the expert from Austria withdrew this proposal.

## H. Hazard communication

84. As no document had been submitted under this agenda sub-item, it was not discussed.

## I. Miscellaneous

### 1. Proposal for review of Chapter 2.1 (Explosives) in the GHS

*Document:* ST/SG/AC.10/C.3/2014/79 (Australia and AEISG)

85. The Sub-Committee noted that the GHS Sub-Committee had agreed to review Chapter 2.1 of the GHS to address issues with classification and hazard communication for explosives during manufacture, storage, handling and use when the explosives are not packaged for transport and was seeking the involvement of the TDG Sub-Committee and its Working Group on Explosives.

86. The Sub-Committee noted also that the expert from Australia proposed to lead a correspondence working group for that purpose. The Sub-Committee had no objection to the establishment of a correspondence working group, but felt that, as it was focal point for physical hazards, including for questions not related to transport, the work should be done at the level of the Working Group on Explosives and that any correspondence group or informal group established in this context should submit its proposals to the TDG Sub-Committee for consideration by the Working Group on Explosives, and that all experts concerned of both sub-committees should participate in the work of the correspondence group and of the Working Group on Explosives. Therefore the expert from Australia was invited to liaise with the Chairman of the Working Group on Explosives.

87. A member of the secretariat recalled that proposals should be submitted as official documents 12 weeks before the opening of the TDG Sub-Committee session.

### 2. Classification of flammable gases – Establishment of a joint TDG-GHS informal working group

*Informal documents:* INF.10/Rev.1 (Belgium and Japan)
INF.17 (CEFIC)

88. Subject to concurrence by the GHS Sub-Committee, the Sub-Committee accepted the offer of the experts from Belgium and Japan to organize and host sessions of a joint TDG-GHS informal working group with the mandate described in paras (a) – (g) of INF.10/Rev.1, with an amendment to para (a) to the effect that the analysis of the necessity to create GHS sub-divisions for flammable gases should be limited to subdivisions within category 1.

### 3. Updating of references to OECD Guidelines

*Informal document:* INF.22 (OECD)

89. The Sub-Committee noted that some references to OECD Guidelines in the GHS had to be updated, and the decisions of the GHS Sub-Committee would have effects on some provisions of the Model Regulations. If needed and where relevant the secretariat was requested to bring the corresponding provisions of the Model Regulations in line with those of the GHS if amended.*

90. Regarding the question of referring to non-dated Guidelines, it was recalled that the normal practice for the Model Regulations was to refer to specific dated standards and, before referring to newly updated standards, to allow for an assessment of the amendments prior to their adoption.*

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* Note by the secretariat: The outcome of the discussion of this subject by the GHS Sub-Committee is summarized in ST/SG/AC.10/C.4/56, paras 39–41.

# X. Programme of work for the biennium 2015-2016 (agenda item 9)

## A. Use of cellulose in Test O.2 (Tests for oxidizing liquids) and in Test O.3 (Tests for oxidizing solids): Calendar for the round robin testing programme

*Document*: ST/SG/AC.10/C.3/2014/95 (France)

91. The inclusion of the "classification and testing of oxidizing liquids and solids" in the programme of work had already been approved by the TDG and GHS sub-committees at their last sessions. The Sub-Committee approved the calendar for the testing programme proposed by the expert from France. Ten laboratories are participating in the work. Others wishing to do so should contact the expert from France.

## B. Working Group on Explosives

*Document*: ST/SG/AC.10/C.3/2014/103 (Chairman of the Sub-Committee)

92. In view of the expected workload on explosives and related matters, not only in relation to transport issues but also for GHS issues to be addressed and the global revision of the Manual of Tests and Criteria, the Sub-Committee agreed that the Working Group should meet twice a year during the next biennium in parallel with the Sub-Committee sessions.

## C. Use of the Manual of Tests and Criteria in the context of the GHS

*Informal documents*: INF.44 (Secretariat)
INF.53 (United Kingdom)

93. The Sub-Committee agreed to review the Manual of Tests and Criteria to include relevant references to the GHS, in accordance with the mandate as proposed in INF.44.

94. All delegations were reminded that they should provide their comments on the first draft prepared by the secretariat in informal documents INF.8 and Adds. 1-5 submitted at the last session, in the same way as done by the expert from the United Kingdom in INF.53. The secretariat was invited to prepare an updated version of this draft taking account of comments received before 27 March 2015.

## D. Consolidated programme of work for 2015-2016

95. On the basis of the proposals in sections A-C above and those discussed and approved under other agenda items or at the last session, the Sub-Committee agreed to include the following items in its work programme for 2015-2016:

(a) Explosives and related matters (including amendments to the list of dangerous goods; tests and criteria for flash compositions; review of test series 6; review of tests in parts I and II of the Manual of Tests and Criteria; review of packing instructions for explosives; harmonized standards for security markings; classification of fireworks; classification of articles under UN 0349; review of Chapter 2.1 of the GHS);

(b) Listing, classification and packing (including amendments to the list of dangerous goods);

(c) Electric storage systems (including testing of lithium batteries, transport of large batteries; thermal batteries);

(d) Transport of gases (including global recognition of UN and non-UN pressure receptacles);

(e) Miscellaneous proposals of amendments to the Model Regulations (including dangerous goods in machinery, apparatus or articles N.O.S; articles containing small quantities of dangerous goods; marking and labelling issues; packaging issues; tank issues);

(f) Cooperation with IAEA (including transport of radioactive material possessing additional hazards);

(g) Global harmonization of transport of dangerous goods regulations with the Model Regulations;

(h) Guiding principles for the Model Regulations (updating, including rationale for assignment of E codes) and development of guidance for the use of the Model Regulations;

(i) Issues relating to the GHS (including corrosivity criteria; criteria for corrosion to metals; criteria for water-reactivity; classification and testing of oxidizing solids; classification criteria for flammable gases; expert judgement/weight of evidence, references to OECD Guidelines; use of the Manual of Tests and Criteria in the context of GHS).

## XI. Draft resolution 2015/... of the Economic and Social Council

*Document*: ST/SG/AC.10/C.3/2014/64 (Availability of information on "UN" containment system approvals) (Belgium)

*Informal document*: INF.16 (consolidated draft resolution) (Secretariat)

96. The expert of China underlined that it would be difficult to provide in an exhaustive way the information requested in the proposal by Belgium. It was clarified that the situation was the same in some other States, in particular federal States, and that if full information could not be provided, communication of the contact details of an authority that could act as focal point for the country would already be very useful to enhance cooperation between governments.

97. The Sub-Committee adopted, without any objection, parts A and B of the proposed draft resolution.

## XII. Election of officers for the biennium 2015-2016 (agenda item 11)

98. On a proposal by the expert from Belgium supported by the experts from Japan and Brazil, the Sub-Committee elected Mr. D. Pfund (United States of America) as Chairman and re-elected Mr. C. Pfauvadel (France) as Vice-Chairman respectively, by acclamation, for the next biennium.

# XIII. Other business (agenda item 12)

## A. Application for consultative status from the European Compliance Organizations for Batteries (EUCOBAT)

*Informal document:* INF.7 (Secretariat)

99. The Sub-Committee agreed to grant EUCOBAT consultative status to allow it to participate in discussions within its area of expertise.

## B. Issues concerning the secretariat

100. The Director of the Transport Division of the United Nations Economic Commission for Europe (UNECE), which provides secretariat services to the Sub-Committee, said that the secretariat was preparing the UNECE annual report which would also mention the work of the Sub-Committee. She invited the delegates to read the report when it became available and send her any comments they might have. She also drew their attention to a questionnaire currently being set out aimed at assessing and improving UNECE communication policy and asked them to respond to it. Lastly, she said that, given the limited staff resources of the Transport Division, she was intending to ask governments for support in the form of secondments of government officials on a non-paying basis to strengthen the secretariat. As the transport of dangerous goods was an area that required additional resources, particularly given the requests for assistance received from many non-UNECE developing countries, she asked the experts to speak with their governments in support of her request, particularly if they themselves might be interested in working in the secretariat.

## C. Tribute to Mr. J.M. Hart and to Mr. R.M. Castle

101. The Sub-Committee learned with regret that the current session would be the last attended by Mr. J.M. Hart (Chairman of the Sub-Committee) and Mr. R.M. Castle, both from the United Kingdom delegation, since they would retire soon. Mr. Hart had served as Head of delegation since 1997 and as Chairman of the Sub-Committee since 2011. Mr. Castle had advised the United Kingdom delegation on packaging issues since 1988. During all these years, they had both participated actively not only in the work of the Sub-Committee, but also in all major modal bodies such as the IMO Sub-Committee on Dangerous Goods, Solid Bulk Cargoes and Containers, the ICAO Dangerous Goods Panel, the UNECE Working Party on the Transport of Dangerous Goods and the RID/ADR/ADN Joint Meeting. The Sub-Committee wholeheartedly thanked them for their outstanding contribution and wished them well for a long and happy retirement.

# XIV. Adoption of the report (agenda item 13)

102. The Sub-Committee adopted the report on its forty-sixth session and its annexes on the basis of a draft prepared by the secretariat.

## Annex

### Draft amendments to the Recommendations on the Transport of Dangerous Goods, Model Regulations and Manual of Tests and Criteria

The draft amendments adopted during the session were listed in documents ST/SG/AC.10/C.3/2014/CRP.4 and Adds. 1–6.

They were adopted with some minor corrections and transmitted to the Committee, which endorsed them, as corrected, at its seventh session (12 December 2014). The adopted texts may be found as annexes I and II to the Committee's report as follows:

- Amendments to the Recommendations on the Transport of Dangerous Goods, Model Regulations: ST/SG/AC.10/42/Add.1;
- Amendments to the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria: ST/SG/AC.10/42/Add.2.